ing (March 11), are, Jupiter, yellow; Regulus, blue. The naked-eye view is very similar to the double star β Cygni, when seen with a power of about one hundred. Struve calls the color of Regulus bluish white; but its color now appears decidedly blue, or greenish blue. S.

Acquisition in infants.

I recently tried teaching Constance A., twelve months old, to ring a common dome table-bell. Perceiving the little knob on top to be somehow concerned, she fingered it clumsily, but could not learn to strike down on it accurately with her raised hand, though I forced her to do so many times. She made clumsy motions, but finally, half accidentally, she rang it. This was enough. She at once rang it repeatedly with great success. I took it away to test her memory, and the next morning she rang it immediately without suggestion, but had it for a moment only. She was then absent four days: on returning, she rang it at once. C.

Devonian strata in Montana.

The following note is written simply to place upon record the first positive identification of Devonian strata in the Rocky-Mountain region of Montana.

In 1872 the Hayden survey brought in, from several localities in the territory, collections of fossils, consisting mainly of separate valves of brachiopods embedded in a hard limestone. They were examined by Prof. F. B. Meek, who found that the species were mostly new, and that the genera represented were, without exception, common to both the carboniferous and Devonian, while a small proportion was also represented in the Silurian. In Hayden's sixth annual report, p. 432, Professor Meek says, "Some of the Producti, Chonetes, and Spirifer have rather a Devonian look, while a very finely striated Hemipronites is very similar to some of the Devonian types of that genus. Even the form I have referred to, H. crenistria, is quite as nearly like some varieties of H. chemungensis (Streptorhynchus chemungensis, of the fourth volume, Paleont. New York), from the Chemung and Hamilton groups of the New-York Devonian, as it is like the carboniferous forms of H. crenistria." However, notwithstanding the resemblance of the fossils to Devonian forms, he regarded the whole collection as belonging to the lower part of the carboniferous, as it contained no strictly Devonian types of corals, crinoids, or lamellibranchs. He at the same time stated his belief that they were referable to a lower horizon than the other carboniferous collections brought in from adjacent portions of Montana at the same time. The specimens examined by Professor Meek were mainly from the mountains on the south, east, and north sides of the Gallatin valley. During the summer of 1884, the writer, in company with Dr. F. V. Hayden, had occasion to revisit a portion of this area. In a section made at a point four or five miles north-west of Hamilton, running north-westwardly from the Gallatin River, a collection of fossils was obtained from beds which at the time were supposed to be of lower carboniferous age, and which were colored carboniferous on the geological map made in 1872. Upon returning from the field, the specimens were submitted to Mr. Charles D. Walcott of the geological survey, who identified them as undoubtedly Devonian. The following lists were prepared by him. List No. 2 includes some specimens obtained from a locality three or four miles north-east of the point from that where those in the first list were found.

Devonian fossils from north-east of Gallatin River, Montana.

LIST No. 1. — Discina lodensis Hall (?); Streptorhynchus chemungensis Conrad; Orthis Vanuxemi (?) Hall (?); Chonetes mucronata Hall; Productus lachrymosus, var. limus Conrad; Productus speciosus; Spirifera disjuncta Sowerby; Spirifera Engelmanni Meek; Rhynchonella pugna Martin; Rhynchonella sinuata Hall; Rhynchonella tethys Billings (?); Atrypa reticularis Linnarsson; Ambocoelia umbonata Conrad; Athyris hirsuta Hall; Athyris sp. (?); Aviculopecten; Grammysia, 3 sp.; Modiomorpha; Nucula; Schizodus.

LIST No. 2. — Streptorhynchus chemungensis Conrad; Spirifera sp. (?); Rhynchonella Horsfordii Hall (?); Athyris hirsuta Hall.

Mr. Walcott says, "Of the twenty-three species of fossils given in lists 1 and 2, twelve are identical with species occurring in the upper Devonian of the Eureka district, Nevada: of the others, two are upper Devonian species in New-York state, and Athyris hirsuta occurs at the base of the carboniferous, in the Eureka district. There is also a species of Athyris too imperfect for determination. The remaining forms are lamellibranchs belonging to five genera; and the species closely resemble those of the lower carboniferous, of the Eureka district." The latter were obtained from the upper portion of the bluff from which the specimens were obtained.

A. C. PEALE,
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The Hall effect.

About a year ago Mr. Shelford Bidwell published a table intended to show that the direction of the magnetic rotation of the equipotential lines of an electric current in any given metal could be inferred from the sign of the effect produced by stress upon the thermo-electric property of the metal.

Although Mr. Bidwell's attempted explanation of the former effect by means of the latter has proved entirely inadequate, the table published is nevertheless interesting and suggestive. It appears, however, that the law indicated in this table is not perfectly general. Mr. Coggeshall and Mr. Stone of the present Harvard junior class, working with my co-operation at the Jefferson physical laboratory, find that French cold-rolled steel would form an exception in Mr. Bidwell's table, acting in the thermo-electric test like copper, but in the other test like iron. Their examination of copper and iron confirms Thomson's results with those metals, and, as a necessary consequence, Mr. Bidwell's table.

The students have examined only these three metals as yet, but will probably extend their investigation to others. E. H. HALL.

Cambridge, March 20.

P.S. — We have now taken a strip of aluminium, cut two pieces from it, and tested one of these pieces for the transverse effect, the other for the thermo-electric effect. The transverse effect is like that in copper. This agrees with the result of my previous examination of aluminium, but does not agree with the result obtained by Mr. Bidwell. The thermo-electric effect was like that in iron. This does agree with the result found by Mr. Bidwell. Hence this specimen of aluminium, which is not the same that I originally used, makes another exception in Mr. Bidwell's table. E. H. H.